

concept

Gro Holst Volden and Knut Samset

Evaluating Public Investment Projects

Lessons and Advice from a
Meta-Evaluation of Four Projects

Concept Report no. 30



for
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of
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investment
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English summary

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Summary

Annual investments in public projects in Norway amount to billions. Examples are roads and rail infrastructure, public buildings, defense acquisitions and large ICT projects. The degree of success and the benefits to society from such investments can only be determined some time after they have entered into the operational face. However, formal evaluations to this effect are seldom done. Obviously, there is a need to know more about the long-term utility of public investments, and hence for carrying out doing systematic ex-post evaluations. The purpose would be to learn from experience both within the responsible ministries and agencies and government institutions, with the aim to improve public investment projects in the future.

The Concept Research Program has a mandate to do trailing research on the major public investment projects that are subjected to external quality assurance under a scheme that was introduced by the Ministry of Finance year 2000. This study reports on the lessons from a pilot evaluation where four external evaluation teams were commissioned to evaluate four projects. These projects represent particularly suited cases for learning since they have all been exposed to systematic ex-ante evaluation up front.

Methodology for comprehensive project evaluation

An ex-post evaluation should take a broad view of the project which would include both the operational perspective (was it implemented efficiently), the tactical perspective (were the anticipated benefits produced), and the strategic perspective (was it useful to society). Experience is that people's concern is mostly restricted to the operational aspects of a project and less on the tactical and strategic.

In the four pilot evaluations we decided to use the same methodology for all. Firstly, a goal oriented evaluation technique which is widely known and is recommended both by the OECD, the UN and the EU. It is commonly referred to as the OECD model or log-frame evaluation. The model stipulates an assessment of five overall evaluation criteria: that is the project's *efficiency*, *effectiveness*, *impact*, *relevance* and *sustainability*. In addition the teams were asked to perform an economic analysis, which involves an assessment of all *economic benefits and costs* accruing to the project.

Findings from four pilot evaluations

The external evaluation teams were also assigned with a researcher from the Concept Research Program. Four entirely different projects were selected for the study with only one thing in common: they were all about five years into their operational phase:

1. An integrated customs and traffic control facility
2. A section of intercity rail infrastructure
3. A section of a highway
4. The production of five high-speed missile and torpedo vessels

The evaluations were carried out separately and involved a thorough review of existing documentation, field inspection and observation and a series of interviews with the key informants. Findings and conclusions are produced in separate reports. Some brief conclusions are summarized below.

The customs and traffic control facility

The project involved a novel type of integrated control facility at the border to Sweden, designed to serve the purposes of both customs, road authority and police at the country's number one road connection to the European continent. The conclusion was that the project was implemented efficiently and well below budget. It has helped improve border control and reduced traffic congestion, and was considered both relevant and sustainable. It was also considered viable in economic terms.

Intercity rail infrastructure

The project involved 9.5 kilometers double rail tracks, mostly in tunnel, and two railway stations in the vicinity of the capital. The project was implemented efficiently but its economic viability was limited. The anticipated road to rail effect has not materialized as anticipated. Passenger counts remain at the same level. This is partly due to an existing bottleneck in the infrastructure closer to the city which will require further investments if the potential of the IC service should be fully achieved.

Section of a highway

The project involved a six kilometer section of the road between Oslo, Norway and Stockholm, Sweden: it is a small part of a larger scheme to build a highway between the two countries. The project was implemented efficiently although with

cost overrun and is likely to become economically viable once the remaining parts of the highway have been constructed, sometime in the future. It has improved traffic safety and reduced environmental problems locally, but seems to have caused a certain shift in passenger traffic from rail to road, which would be an adverse effect of the investment.

High-speed missile/torpedo vessels

The project involves the production of five high-speed vessels for the navy. They will be deployed to perform control missions in coastal areas. The project is considerably delayed and the cost is higher than budgeted. Although the vessels seems to successfully achieve anticipated performance and capability there is disagreement within the defense community whether they are relevant within the current defense strategy and given present days restrained military budgets.

Lessons and advice

The scope and quality of the four evaluations varied. One of the main lessons from the exercise is that the combination of economic analysis and a objectives-oriented evaluation is a viable approach to a comprehensive evaluation of large public investment projects. The approach is highly flexible and therefore applicable to all types of investment projects.

Evaluations demonstrated that there are common weaknesses in the reference material and baseline information, such as the formally agreed objectives, estimates of cost and benefits, and also data on performance in the operational face. 26 specific recommendations have been highlighted as the result of this study, based on the experience with the four pilot evaluations.

One is that a minimum of standardization of information will be useful in future evaluations. It will make it possible to draw lessons on specific topics across several projects and within sectors. It is essential though that the model is generic and flexible and that indicators under each evaluation criterion are selected in order to capture essential features of the investment project under study. Further standardization, for example in terms of common evaluation questions, indicators or scales is discouraged. Evaluations, and in particular ex-post evaluations are initiated essentially to review a project in its wider and strategic context. Identifying all impacts that are attributable to the investment project is essential, for all involved and effected parties, both the intended and the unintended ones, the short- and long term ones, etc.

Evaluation teams should be independent and have considerable evaluation expertise, both regarding goal-oriented evaluation and economic analysis. Teams should be interdisciplinary.

Generally speaking, evaluation is not research, and the lack of data will probably always be a problem, given the time and cost constraints facing the evaluators. Evaluations should be carried out intensively during a couple of months, and the final report should be limited with respect to page numbers. One should focus on what is “good enough”, while at the same time set an acceptable quality standard. The focus should be on validity of information rather than precision. Triangulation of information of different types, from different sources, different informants with differing priorities, etc. is one of the most powerful tools evaluators can use in their efforts to ensure that their conclusions are substantiated with information that is both relevant and true.

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Forskningsprogrammet Concept skal utvikle kunnskap som sikrer bedre ressursutnyttning og effekt av store, statlige investeringer. Programmet driver følgeforskning knyttet til de største statlige investeringsprosjektene over en rekke år. En skal trekke erfaringer fra disse som kan bedre utformingen og kvalitetssikringen av nye investeringsprosjekter før de settes i gang.

Concept er lokalisert ved Norges teknisk- naturvitenskapelige universitet i Trondheim (NTNU), ved Fakultet for ingeniørvitenskap og teknologi. Programmet samarbeider med ledende norske og internasjonale fagmiljøer og universiteter, og er finansiert av Finansdepartementet.

The Concept research program aims to develop know-how to help make more efficient use of resources and improve the effect of major public investments. The Program is designed to follow up on the largest public projects over a period of several years, and help improve design and quality assurance of future public projects before they are formally approved.

The program is based at The Norwegian University of Science and Technology (NTNU), Faculty of Engineering Science and Technology. It cooperates with key Norwegian and international professional institutions and universities, and is financed by the Norwegian Ministry of Finance.

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